

IN THE CLAIMS:

1. (Withdrawn) A stent comprising:
a plurality of annular elements, each annular element having a compressed state and an expanded state, wherein each annular element has a longitudinal dimension which is smaller in the expanded state than in the compressed state; and
at least one connecting member connecting adjacent annular elements, the connecting member having a longitudinal dimension which is larger in the expanded state than in the compressed state, and the connecting member being straight when the annular elements are in the expanded state;
wherein the connecting member is connected to adjacent annular elements at two separate locations that are along the same horizontal line of the stent when the stent is in the compressed state.
2. (Withdrawn) The stent of claim 1, wherein each annular element comprises a plurality of alternating struts and apices connected to each other to form a substantially annular configuration.
3. (Withdrawn) The stent of claim 2, wherein the connecting members are connected to the apices of the adjacent annular members.
4. (Withdrawn) The stent of claim 2, wherein the plurality of struts comprises left and right struts, with each pair of left and right struts connected to each other at an apex.
5. (Withdrawn) The stent of claim 2, wherein each strut has a longitudinal dimension which is smaller when the annular elements are in the expanded state than in the compressed state.
6. (Withdrawn) The stent of claim 2, wherein each strut has a longitudinal dimension which is larger when the annular elements are in the compressed state than in the expanded state.
7. (Withdrawn) The stent of claim 1, wherein the connecting member has a smaller longitudinal dimension when annular elements are in the compressed state than in the expanded state.

8. (Withdrawn) The stent of claim 1, wherein the stent is made from a shape memory alloy.

9. (Withdrawn) The stent of claim 8, wherein the shape memory alloy is Nitinol.

10. (Withdrawn) The stent of claim 1, wherein each connecting member defines an angle with respect to the longitudinal axis of the stent, with the angle being greater when the annular elements in the compressed state than when the annular elements are in the expanded state.

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11. (Withdrawn) The stent of claim 1, wherein the at least one connecting member comprises a plurality of connecting members, with all of the plurality of connecting members oriented at the same angle in the same direction with respect to the longitudinal axis of the stent when the annular elements are in the expanded state.

12. (Withdrawn) The stent of claim 1, wherein the at least one connecting member comprises a plurality of connecting members that define a plurality of rows of connecting members, wherein the connecting members in one row of connecting members are oriented in a different direction with respect to the connecting members in an adjacent row of connecting members.

13. (Canceled).

14. (Withdrawn) The stent of claim 1, wherein the connecting member is connected to adjacent annular elements at two separate locations that are disposed at an angle with respect to the longitudinal axis of the stent.

15. (Previously Amended) A stent comprising:

a plurality of annular elements, each annular element having a compressed state and an expanded state, wherein each annular element has a longitudinal dimension which is smaller in the expanded state than in the compressed state; and

at least one connecting member connecting adjacent annular elements, the connecting member having a longitudinal dimension which is larger in the expanded state

than in the compressed state, and the connecting member being straight when the annular elements are in the expanded state;

wherein the at least one connecting member comprises a first connecting member and a second connecting member, with the first and second connecting members connected to a first annular element along two separate locations thereof, and with the first and second connecting members connected to an adjacent second annular element at a single location.

C 16. (Original) The stent of claim 15, wherein the two separate locations are two separate apices along the first annular element, and the single location is an apex along the second annular element.

17. (Withdrawn) The stent of claim 1, wherein each connecting member is devoid of any points of inflection.

18-19. (Canceled).

20. (Withdrawn) A stent comprising:

a plurality of annular elements, each annular element having a compressed state and an expanded state, wherein each annular element has a longitudinal dimension which is smaller in the expanded state than in the compressed state; and

at least one connecting member connecting adjacent annular elements, the connecting member having a longitudinal dimension which is larger in the expanded state than in the compressed state, and the connecting member being straight when the annular elements are in the expanded state and being curved when the annular elements are in the compressed state.

21. (Withdrawn) A stent comprising:

a plurality of annular elements, each annular element having a plurality of alternating struts and apices connected to each other to form a substantially annular configuration, each annular element having a compressed state and an expanded state, wherein each annular element has a longitudinal dimension which is smaller in the expanded state than in the compressed state;

a plurality of connecting members connecting the apices of adjacent annular elements, each connecting member having a longitudinal dimension which is larger in the

expanded state than in the compressed state, and the connecting member being straight when the annular elements are in the expanded state;

wherein the apices of adjacent annular elements are aligned when the annular elements are in the expanded state; and

wherein the apices of adjacent annular elements are offset from each other when the annular elements are in the compressed state.

22. (Currently Amended) A stent having a length and comprising:

a plurality of annular elements, each annular element having a compressed state and an expanded state, wherein each annular element has a longitudinal dimension which is smaller in the expanded state than in the compressed state; and

at least one connecting member connecting adjacent annular elements, the connecting member having a longitudinal dimension which is larger in the expanded state than in the compressed state, and the connecting member being straight when the annular elements are in the expanded state;

wherein the length of the stent remains the same when the annular elements are in both the compressed and expanded states

~~[wherein the entire length of the stent experiences a helical twist when the stent is expanded from the compressed state to the expanded state].~~

23. (New) The stent of claim 22, wherein each annular element comprises a plurality of alternating struts and apices connected to each other to form a substantially annular configuration.

24. (New) The stent of claim 23, wherein the connecting members are connected to the apices of the adjacent annular members.

25. (New) The stent of claim 23, wherein the plurality of struts comprises left and right struts, with each pair of left and right struts connected to each other at an apex.

26. (New) The stent of claim 23, wherein each strut has a longitudinal dimensional which is smaller when the annular elements are in the expanded state than in the compressed state.

27. (New) The stent of claim 23, wherein each strut has a longitudinal dimensional which is larger when the annular elements are in the compressed state than in the expanded state.

28. (New) The stent of claim 22, wherein the connecting member has a smaller longitudinal dimension when the annular elements are in the compressed state than in the expanded state.

29. (New) The stent of claim 22, wherein the stent is made from a shape memory alloy.

30. (New) The stent of claim 29, wherein the shape memory alloy is Nitinol.

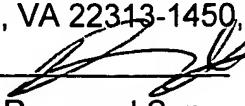
31. (New) The stent of claim 22, wherein each connecting member defines an angle with respect to the longitudinal axis of the stent, with the angle being greater when the annular elements in the compressed state than when the annular elements are in the expanded state.

32. (New) The stent of claim 22, wherein the at least one connecting member comprises a plurality of connecting members, with all of the plurality of connecting members oriented at the same angle in the same direction with respect to the longitudinal axis of the stent when the annular elements are in the expanded state.

33. (New) The stent of claim 22, wherein the at least one connecting member comprises a plurality of connecting members that define a plurality of rows of connecting members, wherein the connecting members in one row of connecting members are oriented in a different direction with respect to the connecting members in an adjacent row of connecting members.

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Date: November 26, 2003 By: 

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